



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,008	06/11/2004	David Lawrence Von Kleeck	001345	4007
29569	7590	06/14/2006	EXAMINER	
JEFFREY FURR 253 N. MAIN STREET JOHNSTOWN, OH 43031			BUSS, BENJAMIN J	
			ART UNIT	PAPER NUMBER
			2129	

DATE MAILED: 06/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/710,008

**Applicant(s)**VON KLEECK, DAVID  
LAWRENCE**Examiner**

Benjamin Buss

**Art Unit**

2129

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/11/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 2129

## DETAILED ACTION

Claims 1-20 are pending in this application.

### *Priority*

- 5 Examiner acknowledges Applicant's claim for priority based on 60/320,261 filed on 6/11/2003.

### *Information Disclosure Statement*

- 10 The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." There are at least eight references in the specification that are not in the IDS filed on 6/11/2004. Unless these references have been cited by the examiner on form PTO-892, they have not been considered.

### *Specification*

- 15 The disclosure is objected to because it is replete with minor informalities, such as the following:
- ¶4: Change "the initial the initial" to -- the initial --.
  - ¶5: Change "selection process"s initial" to -- selection process's initial --.
  - ¶5: Change "a company"s decision" to -- a company's decision --.
  - ¶6: Change "are:1." to -- are: 1. --.
  - 20 - ¶6: Change "process2." To -- process; 2. --.
  - ¶6: Change "caution3." to -- caution; 3. --.
  - ¶40: Change "the initial the initial" to -- the initial --.
  - ¶41: Change "selection process"s initial" to -- selection process's initial --.
  - ¶42: Change "are:1." to -- are: 1. --.
  - 25 - ¶42: Change "process2." To -- process; 2. --.
  - ¶42: Change "caution3." to -- caution; 3. --.
  - ¶47: Change "incorporate "Company"s Intelligence" into" to -- incorporate "Company's Intelligence" into --.
  - ¶48: Change "is a done" to -- is done --.

Art Unit: 2129

- ¶53: Change "The system"s" to -- The system's --.
- 30 - ¶56: Change "successful agent"s cost is" to -- successful agent is --.
- ¶65: Change "Genetic Algorithms (Gas) used" to -- Genetic Algorithms (GAs) --.

Appropriate corrections are required.

### ***Claim Objections***

35 Claims 1, 6, 8, 16, and 20 are objected to because of the following informalities:

- Claims 1 and 16:
  - o Change "a) inputing data," to -- a) inputting data; --.
  - o Change "a) having a Model identification" to -- b) having a Model identification --.
  - o Change "b) having a Model parameter" to -- c) having a Model parameter --.
- 40 - Claim 6 and 20: Change "to review said data; Self" to -- to review said data: Self --.
- Claim 8: Change "output results Kohonen" to -- output results: Kohonen --.

Appropriate corrections are required.

### ***Claim Rejections - 35 USC § 101***

45 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

50 Claims 6-8 and 20 are rejected under 35 U.S.C. 101 because the claimed invention is not supported by either a credible asserted utility or a well established utility.

- Claims 6-7 and 20: The using of an artificial neural network by fuzzy inference systems is not a credible utility or a well established utility. Examiner knows of fuzzy neural networks, which are neural networks with fuzzy computations, but they do not equate to a fuzzy inference systems using an artificial neural network. Examiner does not understand how a fuzzy inference system can use an artificial neural network.
- 55 Therefore, the Examiner cannot evaluate claims 6-7 or 20.

Art Unit: 2129

- Claim 8: Machine learning methods do not have a credible or well established utility **as being** artificial neural networks. Examiner does not understand how machine learning methods constitute neural networks, as the claim implies that:

- 60
  - o Kohonen Learning **is** one or more artificial neural networks;
  - o Bayesian Learning **is** one or more artificial neural networks;
  - o Widrow-Huff Learning **is** one or more artificial neural networks;
  - o Back propagation **is** one or more artificial neural networks;
  - o Genetic Algorithms **are** one or more artificial neural networks.

65 Claims 6-8 and 20 are also rejected under 35 U.S.C. 112, first paragraph. Specifically, since the claimed invention is not supported by either a credible asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

***Claim Rejections - 35 USC § 112***

70 The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

75 Claims 6-8, 15, and 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

- 80
  - Claims 6-7 and 20: The disclosure does not describe how fuzzy inference systems use artificial neural networks.
  - Claim 8: The disclosure does not describe how each machine learning method can be used as artificial neural networks to estimate model parameters.
  - Claim 15: A middle state is not described in the claims or the specification. Having three states does not
- 85
  - imply that one state is a middle state. For example, the three states could form a triangle. Lacking a written description detailing how a state is a middle state, the person of ordinary skill in the art would not be able to make and/or use the invention as currently claimed.

Art Unit: 2129

***Claim Rejections - 35 USC § 112***

90 The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

95 Claim 6-8, and 20 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are:

- Claim 6-7 and 20: The relationship between the fuzzy inference systems and the artificial neural networks.
- Claim 7: The relationship between each of the artificial neural networks (SOM, NBC, LVQ, PNN, and NGO).
- Claim 8: The relationships between the parameter and the one or more artificial networks.

100

***Claim Rejections - 35 USC § 112***

Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- 105
- Claim 15 recites the limitation "the middle state" in line 3. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

110 A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

115 Claims 1-5, 8, and 16-19 are rejected under 35 U.S.C. 102(b) as being anticipated by **Casalino** ("Semantic Phase Transition in a Classifier Based on Adaptive Fuzzy System").

Art Unit: 2129

**Claims 1 and 16:**

**Casalino** anticipates:

- Inputting data (p808-812 especially “input” throughout);
- 120 - Having a Model identification step review said data and output results (p808-812 especially “classification” throughout and “output” §V.A;§V.B);
- Having a Model parameter estimation step review said output results (p808-812 especially “training” and “learning” throughout); and
- Outputting final results (p808-812 especially “values of the output” §II and “class” §II;§VI.A).

125

**Claims 2 and 17:**

**Casalino** anticipates:

- Where said model identification step comprises identifying by decision nodes (p808-812 especially “units” §II;§V;§V.A;§V.B and “node” §V.A).

130

**Claims 3 and 18:**

**Casalino** anticipates:

- Where said model identification step uses artificial neural networks to review said data (p808-812 especially “neural network” §V;§V.B and “network” §V.A; Also see Figure 1).

135

**Claims 4 and 19:**

**Casalino** anticipates:

- Where said model identification step uses fuzzy inference systems to review said data (p808-812 especially “inferential fuzzy system” §IV).

140



Art Unit: 2129

**Claim 5:**

**Casalino** anticipates:

- Where said model parameter estimation step uses machine learning to review said output results (p808-812 especially “learning formulas for the system’s parameters” §II and “training” and “learning” throughout).

145

**Claim 8:**

**Casalino** anticipates:

- Where said model parameter estimation step uses one or more of the following set of artificial neural networks to review said output results: Kohonen Learning, Bayesian Learning, Widrow-Huff Learning, Back propagation Learning, and Generic Algorithms (p808-812 especially “Back-Propagation” §II).

150

***Claim Rejections - 35 USC § 102***

Claims 1-5, 8, and 16-19 are rejected under 35 U.S.C. 102(b) as being anticipated by **Neuneier** (USPN 6,317,730).

155 **Claims 1 and 16:**

**Neuneier** anticipates:

- Inputting data (C1-8 especially “input data” C5:35-50);
- Having a Model identification step review said data and output results (C1-8 especially “output value” C4:30-60 and “modeling” C1:1-20 and “membership functions” C4:60-C5:10 and “mapping” C5:25-35 and “actual output value of the neural network” C5:55-67);
- Having a Model parameter estimation step review said output results (C1-8 especially “training” C5:35-60 and “parameter” C5:35-60 and “new rule” C2:40-60); and
- Outputting final results (C1-8 especially “new fuzzy rule set NFR is thereby characterized by the new neural network NNN” C8:1-30).

160

165



Art Unit: 2129

**Claims 2 and 17:**

**Neuneier anticipates:**

- Where said model identification step comprises identifying by decision nodes (C1-8 especially "neuron" C4:30-55).

170

**Claims 3 and 18:**

**Neuneier anticipates:**

- Where said model identification step uses artificial neural networks to review said data (C1-8 especially "neural network" throughout).

175

**Claims 4 and 19:**

**Neuneier anticipates:**

- Where said model identification step uses fuzzy inference systems to review said data (C1-8 especially "fuzzy rule set" C4:30-55).

180

**Claim 5:**

**Neuneier anticipates:**

- Where said model parameter estimation step uses machine learning to review said output results (C1-8 especially "training" C5:35-60 and "learning" C7:45-60).

185

**Claim 8:**

**Neuneier anticipates:**

- Where said model parameter estimation step uses one or more of the following set of artificial neural networks to review said output results: Kohonen Learning, Bayesian Learning, Widrow-Huff Learning, Back propagation Learning, and Generic Algorithms (C1-8 especially "back-propagation" C7:45-60).

190

Art Unit: 2129

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this

Office action:

195 (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in  
section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are  
such that the subject matter as a whole would have been obvious at the time the invention was made to a person  
having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the  
manner in which the invention was made.

200 Claims 6, 8, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Neuneier** (USPN 6,317,730)  
in view of **Yamaguchi** (USPN 6,349,293).

**Claims 6 and 20:**

205 **Neuneier** fails to teach:

- Where said fuzzy inference systems uses one or more of the following set of artificial neural networks to review said data; Self Organizing Map, Naive Bayesian Classifier, Learning Vector Quantization, Probabilistic Neural Network and Neural Genetic Optimizer.

**Yamaguchi** teaches:

- 210
- Where said fuzzy inference systems uses one or more of the following set of artificial neural networks to review said data; Self Organizing Map, Naive Bayesian Classifier, Learning Vector Quantization, Probabilistic Neural Network and Neural Genetic Optimizer (C1-13 especially "The FNN 609 is optimized (trained) by using a genetic algorithm" C8:1-35 and "genetic optimizer" C12:1-15; Also see Figure 7).

**Motivation:**

215 **Neuneier** and **Yamaguchi** are from the same field of endeavor, data processing. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of **Neuneier** by using neural genetic optimization as taught by **Yamaguchi** for the benefit of optimizing the FNN whereby input information, and combinations thereof, that are most useful for computing a desired output are selected so as to optimize the operation of the FNN (**Yamaguchi** C2:20-45) .

220

Art Unit: 2129

**Claim 8:**

**Yamaguchi** teaches:

- Where said model parameter estimation step uses one or more of the following set of artificial neural networks to review said output results: Kohonen Learning, Bayesian Learning, Widrow-Huff Learning, Back propagation Learning, and Generic Algorithms (C1-13 especially "genetic algorithm" C8:1-35).

***Claim Rejections - 35 USC § 103***

Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Neuneier** (USPN 6,317,730) in view of **Mascarenhas** (USPAP 2002/0029162).

**Claim 11:**

**Neuneier** fails to teach:

- Where said results have three states.

**Mascarenhas** teaches:

- Where said results have three states (p1-13 especially "three states" ¶24).

**Motivation:**

**Neuneier** and **Mascarenhas** are from the same field of endeavor, data processing. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of **Neuneier** by having three states for the results as taught by **Mascarenhas** for the benefit of accounting for uncertainty in the observation technology (**Mascarenhas** ¶24).

**Claim 12:**

**Mascarenhas** teaches:

- Where said states are no not move forward, move forward with caution and move forward (p1-13 especially "selectively upregulated, selectively downregulated, or unchanged" ¶24; *This claim is directed toward non-functional descriptive material which does not further limit the claims. Assigning labels or names to the states does not change the functionality of the invention*).

Art Unit: 2129

250 **Claim 14:**

**Mascarenhas** teaches:

- Where said data is personality data. (p1-13 especially "Personality Trait Topography" ¶63 and "psychological, behavioral, personality, or other attributes" ¶51; *This claim is directed toward non-functional descriptive material which does not further limit the claims. Assigning labels or names to the data does not*

255 *change the functionality of the invention*).

***Claim Rejections - 35 USC § 103***

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Neuneier** (USPN 6,317,730) and

260 **Mascarenhas** (USPAP 2002/0029162) in further view of **Zizzamia** (USPAP 2004/0054553).

**Claim 13:**

The combination of **Neuneier** and **Mascarenhas** fails to teach:

- Where said data is biographical data.

265 **Zizzamia** teaches:

- Where said data is biographical data (p1-11 especially "historical producer data" ¶19; *This claim is directed toward non-functional descriptive material which does not further limit the claims. Assigning labels or names to the data does not change the functionality of the invention*).

**Motivation:**

270 **Zizzamia** and the combination of **Neuneier** and **Mascarenhas** are from the same field of endeavor, data processing. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined teachings of **Neuneier** and **Mascarenhas** by using biographical data as taught by **Zizzamia** for the benefit of providing a system and method that employ data sources to develop a global producer database and model predictive of the future profitability and productivity of licensed professionals

275 such as insurance agents (**Zizzamia** ¶21).

Art Unit: 2129

***Claim Rejections - 35 USC § 103***

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Neuneier** (USPN 6,317,730) in view of **Tewari** (USPN 6,004,267).

280

**Claim 9:**

**Neuneier** fails to teach:

- Where said results have two states.

**Tewari** teaches:

285

- Where said results have two states (C1-21 especially "binary probability predictions" C12:60-C13:5).

**Motivation:**

290

**Neuneier** and **Tewari** are from the same field of endeavor, data processing. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of **Neuneier** by having two states for the results as taught by **Tewari** for the benefit of representing known status (positive or negative for the feature) (**Tewari** C12:60-C13:5).

**Claim 10:**

295

- Where said states are hire and do not hire (*This claim is directed toward non-functional descriptive material which does not further limit the claims. Assigning labels or names to the states does not change the functionality of the invention*).

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

300

- Murphy (USPN 5,058,034)
- Ng (USPN 6,470,261)
- Baumgart-Schmitt (USPN 6,272,378)
- Lin (USPN 6,675,159)
- Agrafiotis (USPAP 2002/0091655)
- Guiver (USPN 5,809,490)

Art Unit: 2129

- 305
  - Shirantani (USPAP 2002/0181784)
  - Shaffer (USPAP 2001/0013026)
  - Hoffman (USPN 6,278,799)
  - Imagawa (USPN 5,479,570)
  - Holtzman (USPAP 2002/0062368)
- 310
  - Rodvold (USPAP 2002/0059154)
  - Giuffre (USPN 6,042,548)
  - Abbott (USPAP 2001/0040590)
  - Amado (USPN 5,537,590)
  - Tran (USPN 6,070,140)
- 315
  - Cohen (USPN 5,317,673)
  - Pham (USPN 5,970,482)
  - Shinohara (USPN 5,832,183)
  - Faupel (USPN 5,715,821)
  - Howard (USPN 6,336,109)
- 320
  - Chen (USPAP 2002/0010691)
  - McClanahan (USPAP 2002/0184171)
  - Tamayo (USPN 6,836,773)

Claims 1-20 are rejected.

325

***Correspondence Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin Buss whose telephone number is 571-272-5831. The examiner can normally be reached on M-F 9AM-5PM.

330

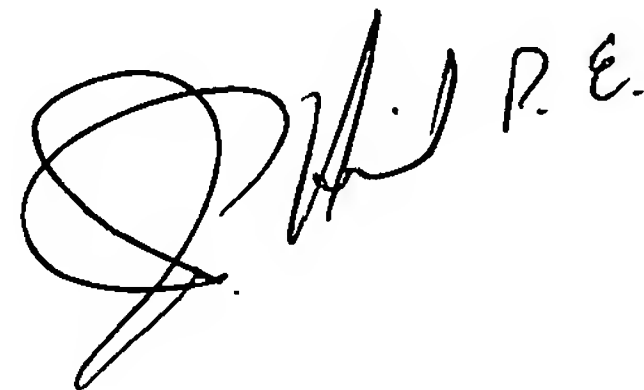
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Vincent can be reached on 571-272-3080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2129

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or  
335 Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Benjamin Buss  
Examiner  
Art Unit 2129

340 BB

A handwritten signature in black ink, appearing to read "B. Buss", followed by the printed text "P. E." to its right.